ket DBS services with smaller antennas and lower installation costs than PRIMESTAR's current offerings. DirecTV and USSB are DBS providers competing today for subscribers. DirecTV controls 27 high power channel assignments over which it will purportedly be able to transmit as many as 216 video/audio channels, and USSB is providing 20 channels of video service. (In the Matter of Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992, Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 94-48, First Report (Sept. 28, 1994) ("1994 Cable Report") at ¶¶ 63, 64.) EchoStar is poised to enter the DBS field in 1995 with 21 transponders, and a number of other ventures have been authorized to provide DBS service (1994 Cable Report at ¶67).

11. It is clear, however, that the product market in which PRIMESTAR competes now and will be competing in mid-1996 is broader than DBS services. A monopolist of DBS services would not be able to price above competitive levels because most consumers have other ways to receive multiple channels of video programming. Among the options available to most consumers is cable television. Over 96 percent of U.S. television households could receive cable service by the end of 1993 (1994 Cable Report at ¶18). Distribution of video by wire has traditionally been provided almost exclusively by cable television operators. This is expected to change in the near future. In particular local telephone companies have been authorized to provide VDT services which provide the facilities for additional direct competition with cable television operators. Twenty-four applications from telephone companies, including six of the seven RBOCs as well as GTE, have been filed with the Commission for permanent commercial VDT service to over 8.5 million homes (1994 Cable Report at ¶109). A number of telephone companies have plans to implement VDT as well as video programming services, and at least some of these are likely to be operational by 1996. For example, Ameritech has recently hired 2,200 workers to plan and implement its entry into VDT cable television. (See Detroit Free Press, Oct. 12, 1994 at 9C.) Nynex, Bell Atlantic and Pacific Telesis have unveiled a \$300 million plan to compete with cable TV with programming distributed by telephone starting in the 2nd half of 1995. (See Communications Daily, Nov. 1, 1994.)

- 12. Other multiple channel programming choices available to consumers include MMDS or "wireless cable." By June 1994 there were 143 such systems serving over a half million subscribers (1994 Cable Report at ¶79). It has been estimated that nearly 40 percent of U.S. television households are capable of receiving wireless cable (1994 Cable Report at ¶90 and n. 254). There are also approximately three to four thousand SMATV systems nationwide serving over 1 million subscribers (1994 Cable Report at ¶92). Some consumers have, or could obtain, home satellite dishes receiving service from TVRO distributors utilizing C band satellite technology. While the majority of the approximately 4 million home satellite dishes in use were purchased by owners without access to cable television, 37 percent of the owners did have access to cable television and still chose to buy this method of program delivery (1994 Cable Report at ¶¶ 73, 74). In the future LMDS services using high-frequency microwave channels in the 28 GHz band could also be available to consumers. Currently an LMDS service is operating in Brooklyn, New York providing forty-nine video channels, and over 900 applications have been submitted to the FCC for similar services (1994 Cable Report at ¶122 and n. 349).
- 13. I have concluded that PRIMESTAR's DBS services utilizing the channel assignments at issue in this proceeding will compete in a broad video market that includes at least cable television, VDT systems, MMDS providers, SMATV systems, TVRO providers, and, possibly in the future, LMDS systems. My conclusions are consistent with the Commission's own findings (1994 Cable Report at ¶49). This market definition is conservative because it does not take into account the important competitive constraints offered by broadcast television and VCRs.

#### IV. Horizontal Issues

#### A. Control of DBS Channels

- 14. One of the arguments raised by petitioners is that the application will result in TEMPO/TCI controlling an excessive number of high power DBS channels (Petition to Deny of DirecTV, Inc. at 3, Petition to Deny of EchoStar Satellite Corp. at 26, 27, and Petition to Deny of Directsat Corp. at 2). A modest increase in concentration of control of DBS channels, however, has no competitive significance because the relevant market is much broader than DBS services. I have concluded, as has the Commission, that DBS service is not a market. That means that even a complete consolidation of DBS channels into the hands of a single operator would not convey market power unless that "monopolist" would not face effective competition from other delivery modes.
- 15. Assuming arguendo that the market consisted merely of DBS services, there would be no increase in concentration of control of DBS channels from the grant of this application. PRIMESTAR will be moving its satellite-to-home services from one orbital location to another. TEMPO Satellite, Inc., will retain its DBS authorization at 119°W. TCI will not control the use of PRIMESTAR's DBS channels because TCI has only a minority interest in PRIMESTAR. Thus, concentration in the control of channels would not be increased by this transaction in a DBS market.
- 16. To explain the preceding point in somewhat greater detail, consider that PRIMESTAR has first option on TEMPO Satellite Inc.'s current assigned 11 high power DBS channels at 119°W. If the application is approved, and PRIMESTAR is able to utilize the channels at 110°W, PRIMESTAR will give up that option and instead lease the 27 channels that TEMPO will acquire from Advanced at 110°W. (See Declaration of John J. Cusick at ¶3.) The net result is that PRIMESTAR will provide service on the 27 channels now assigned to Advanced, and TEMPO Satellite will independently operate the 11 channels that it previously optioned to PRIMESTAR. As a result, the 27 and 11 channels will be

utilized by separate entities, as would be the case today. At worst it might be argued that TCI, not TEMPO, would be acquiring greater control of DBS channels if the application is approved. Added to TCI's original 11 channels through its ownership of TEMPO Satellite Inc. would be its approximately 22 percent share, reflecting its ownership interest in PRIMESTAR, of the 27 channels which would be leased to PRIMESTAR, or 6 more channels. But if one were to attribute channels to TCI based on its partial ownership of PRIMESTAR, one should also apportion the remaining 21 channels to PRIMESTAR's other six owners. If one were to do so, the application would in effect be deconcentrating the control of DBS channels because Advanced's 27 channels would be split from single control into seven separate pieces.

17. If one examines the broader market for multi-channel video programming, granting the application is clearly pro-competitive. PRIMESTAR's competitive effectiveness will be enhanced with more channels and Advanced's DBS channel assignment will be employed more quickly which will promote competition in the video market-place.

#### B. PRIMESTAR's Future Incentives to Promote DBS Service

- 18. Another claim by opponents of the application is that allowing cable-owned DBS operators to acquire more channels will result in less vigorous promotion of DBS services in certain cable franchise areas. (Petition to Deny of EchoStar Satellite Corp. at 27-29). This claim fails to analyze properly PRIMESTAR's incentives in the video market as that market will evolve in the near future. Moreover, if such a claim were true, petitioners making this claim would benefit from grant of the very application they are opposing. This is strong evidence that the arguments they are making are spurious and that their true motive is to oppose an application that is pro-competitive.
- 19. Petitioners propose that PRIMESTAR will not be positioned to provide services to cable subscribers, will not be marketed aggressively, and will be a mere "adjunct" to cable. Even if PRIMESTAR did have the inclination to avoid competition in its owners' territories, effective com-

petition from others now and in the near future makes following that inclination untenable. PRIMESTAR will be making an investment in its DBS system of approximately \$1 billion, and it faces current competition from at least two other DBS providers, DirecTV and USSB, and likely future competition from EchoStar and from telco VDT. In these circumstances. PRIMESTAR risks failure of its DBS venture and the loss of its sunk costs unless it engages in aggressive nationwide marketing of its DBS offering. PRIMESTAR simply cannot afford to ignore more than 50 percent of the potential DBS market, i.e., the percentage of U.S. television households located in PRIMESTAR's cable partners' respective franchise areas. To do so would not prevent erosion of cable's market share to DBS, but would merely cede that share to PRIMESTAR's DBS competitors. That strategy cannot be profitable to PRIMESTAR's owners. As a result, PRIMESTAR clearly will have the incentive to vigorously promote its services everywhere, without regard to its partners' investment in individual cable systems.

### C. The Significance of Competitor Complaints

20. Another claim by opponents of the application is that allowing cableowned DBS operators to acquire more channels diminishes competition in the MVPD market because such operators do not have incentives to compete with their cable affiliates (Petition to Deny of DirecTV, Inc. at 20, Petition to Deny of EchoStar Satellite Corp. at 27, and Petition to Deny of Directsat Corp. at 2). Strong evidence that this claim is invalid is provided by the opposition to the application of PRIMESTAR's DBS competitors. If petitioners' argument were correct that PRIMESTAR will not aggressively promote its services and compete in its cable partners' respective territories, these DBS competitors could only gain. PRIMESTAR would not be a competitive factor in over 50 percent of their market. In effect what petitioners are claiming is that the application would remove 27 high power channels from effective competition to them. If they were correct, they would be major beneficiaries of the very action they are opposing! Simple selfinterest is inconsistent with the argument they are making.

Clearly, it is aggressive competition from PRIMESTAR that its DBS competitors fear, not that PRIMESTAR will pull its punches in its partners' cable territories. Granting the application would allow PRIMESTAR to compete on an equal footing with DirecTV, which itself controls 27 channels and through compression can offer consumers well over 200 channels. PRIMESTAR is simply seeking the same capacity as its closest competitor, who clearly opposes the application for its own anti-competitive gain. Other DBS competitors can achieve similar capacity because, as DirecTV observes, the Commission has recognized that DBS participants may want to combine their resources and assignments (DirecTV Petition to Deny at 16). The Petitioners are simply seeking to prevent a pro-competitive transfer of Advanced's assignment that will result in more effective competition from PRIMESTAR.

## D. Anti-competitive Pricing

- 22. EchoStar in its petition raises the specter that TCI and/or PRIMESTAR will engage in anti-competitive pricing that "could suffocate DBS competition" without providing any legitimate economic analysis that demonstrates that such strategies are feasible or profitable (EchoStar Petition to Deny at 30). EchoStar merely asserts that PRIMESTAR could somehow obtain a cost advantage to undercut its DBS competitors' prices and drive them out of business.
- 23. EchoStar has failed to articulate a legitimate anti-competitive theory. In the first place, pricing to take advantage of lower costs is the very essence of competitive pricing. If PRIMESTAR were somehow to have lower costs and offered lower prices because of those lower costs, competition would be enhanced, not harmed. Moreover, contrary to petitioners' other claims, such lower prices for PRIMESTAR services would likely maximize the competitive significance of DBS vis a vis existing cable operators.
- 24. Second, EchoStar provides no basis to believe that PRIMESTAR would be able to achieve lower costs in order to effectuate the alleged "anti-competitive" pricing. EchoStar simply asserts that TCI's control over a

large number of DBS assignments could translate into the largest subscriber base resulting in lower average costs. But if the application is approved, PRIMESTAR will lease only the same number of DBS assignments as DirecTV. Other would-be DBS competitors could reach similar numbers of channels by combining assignments. Moreover, if EchoStar's theory were correct, DirecTV poses an anti-competitive threat today because it controls the largest DBS assignment. Granting the application, because it allows another competitor to have the same number of channel assignments as the current market leader, actually removes the "threat" that controlling the greatest number of frequencies results in the ability to engage in anti-competitive pricing.

- 25. Finally, it is virtually impossible that TCI or PRIMESTAR could profitably engage in anti-competitive or predatory pricing in the video market. Predatory pricing involves pricing below cost (and hence incurring immediate losses) in an effort to eliminate competitors, and with the goal of raising prices (and thus earning future profits) once the competitors have exited. Predatory pricing rarely makes sense in unregulated markets because the lost profits during the exclusionary pricing period cannot be recouped later. Exclusionary pricing cannot be profitable if large losses are necessary to drive competitors out of the market and/or if those losses cannot be recovered through above-competitive prices later because other competitors can enter or expand.
- These factors inhibiting predatory pricing are present in the video market. Even focusing narrowly on the DBS segment, it would be difficult to force existing DBS competitors out of the market with low prices given that they have already incurred the significant sunk costs of entry. Existing DBS competitors would find it profitable to remain in the market if they could still cover their low variable costs. Thus, it likely would require a long period of very low prices to drive most existing DBS competitors out of the market, which would mean very large losses for PRIMESTAR to engage in such a strategy. But these losses could not be recovered later because of the presence in the market of other competitors, especially DirecTV and telephone companies

providing VDT and other video services. PRIMESTAR simply will not be able to predate against or exclude all other competitors' video services through a strategy of temporary low prices, because telephone companies as well as DirecTV's parent, General Motors, have deeper pockets than PRIMESTAR or its owners. But this means it is not profitable for PRIMESTAR to predate against a subset of other competitors because above-competitive prices and profits cannot be sustained after these other competitors have been eliminated.

#### V. Vertical Market Foreclosure

- 27. EchoStar has also alleged that TCI and/or PRIMESTAR could harm DBS competitors by denying or providing only on discriminatory terms programming from PRIMESTAR-affiliated programming vendors (EchoStar Petition to Deny at 33-35). The evidence clearly shows that TCI and PRIMESTAR lack the incentive and the ability to engage in anti-competitive vertical foreclosure.
- 28. EchoStar fails to recognize that granting the application would not materially affect the ability of PRIMESTAR's cable partners to foreclose competing DBS providers. Under EchoStar's theory, PRIMESTAR's partners should be engaged in anti-competitive foreclosure today as a means of protecting their cable franchises from competition from DirecTV and USSB. Yet DirecTV and USSB have succeeded in licensing popular programming from PRIMESTAR's owners. This is strong evidence that PRIMESTAR's owners lack the incentive and/or the ability to deny programming for anti-competitive gain.
- 29. Similarly, EchoStar asserts that PRIMESTAR's partners could find it profitable to charge all DBS providers "artificially" high prices for PRIMESTAR-affiliated programming for anti-competitive purposes (EchoStar Petition to Deny at 35). But again, EchoStar fails to recognize that the incentive and ability to do this, such as they are, are also unaffected by granting the application. If PRIMESTAR-affiliated programmers could charge artificially high prices, they would do so whether or not the application is granted. But the reason PRIMESTAR-affiliated programmers cannot gouge any video distributor today is

because PRIMESTAR-affiliated programmers face the same competitive constraints from the highly competitive program supply industry as all other participants in that market, and that will remain true if the application were granted.

30. TCI and its PRIMESTAR cable partners simply do not control a sufficient share of available programming to prevent DBS competitors access to attractive programming. The PRIMESTAR cable partners have ownership interests in only 28 of the 107 national programming services listed in the 1994 Cable Report (1994 Cable Report at Appendix G, Tables 3, 4 and 6). In addition no cable operator has any ownership interest in 68 of the 98 announced new programming services (1994 Cable Report at Appendix G, Table 5).

#### V. Conclusion

31. The application to assign Advanced's DBS authorizations to TEMPO is pro-competitive because it will permit PRIMESTAR to compete more effectively as a DBS provider. With the increased channel capacity PRIMESTAR will have the capability to offer consumers comparable numbers of programs as other competitors in the marketplace such as DirecTV. Arguments raised by PRIMESTAR's competitors that the transfer is anti-competitive do not survive analysis and should be rejected.

I declare under penalty of perjury that the foregoing is true and correct.

Bruce M. Owen

November 22, 1994

# BEFORE THE FEDERAL COMMUNICATIONS COMMISSION

In the Matter of: Application for Consent to Assignment of DBS Construction Permit from Advanced Communications Corporation to TEMPO DBS, Inc.

DBS-84-01/94-15 ACP

## Supplemental Declaration of Bruce M. Owen

- 1. I am an economist and president of Economists Incorporated, an economic consulting firm located at 1233 20th Street, N.W., Washington, D.C. 20036. I previously filed a declaration in this proceeding addressing both the economic issues raised by TEMPO DBS, Inc.'s ("TEMPO's") application to acquire Advanced Communications Corporation's ("Advanced's") direct broadcast satellite ("DBS") authorizations and allegations made in various Petitions to Deny by existing and potential DBS competitors that the assignment would result in competitive harm. I have been asked to respond to the Consolidated Replies of DirecTV, Inc. ("DirecTV") and Echostar Satellite Corporation ("Echostar") and their economic consultants, Professor Jerry A. Hausman and Professor Roger G. Noll, respectively.
- 2. It is noteworthy that neither the Replies by DirecTV and Echostar opposing TEMPO's application nor their economic experts address the point made in my earlier declaration (Owen Declaration at ¶¶ 20, 21) that the alleged anticompetitive effects, if true, would benefit Echostar and DirecTV. That is, if granting the application were to result in less competition among DBS and/or multichannel video program distribution ("MVPD") providers, that would imply that DirecTV and

Echostar, facing a less competitive marketplace, would gain higher profits and a larger market share. In that case, however, we would not expect to see them opposing an action that their own arguments indicate would lead to their own gain. A more likely explanation for their opposition is that TEMPO's application is pro-competitive, because in that case the economic interest of DirecTV and Echostar would be to oppose the application. Thus, the consultants' opinions on the diminution in competition caused by the application (Hausman at ¶16, Noll at ¶¶ 17-32) are belied by the identity of their sponsors. Moreover, Professor Hausman's view that the PRIMESTAR partners have much to lose if DBS succeeds (Hausman at ¶29) fails to explain why these partners are willing to invest \$1 billion in DBS.

- 3. Echostar's assertion (Echostar's Consolidated Reply at 5) that its DBS channel assignment falls short of the number necessary for the provision of a viable DBS service explains why PRIMESTAR needs the Advanced assignment in order to compete effectively. Indeed, Echostar's expert acknowledges the real purpose behind the application, i.e., to give PRIMESTAR access to high-power DBS and a greater capacity than is available on its FSS system (Noll at ¶ 25). This will tend to increase competition, as I previously explained (Owen Declaration at ¶¶ 17, 21). Moreover, Echostar's expert's conclusion that USSB and DirecTV are not entirely independent competitors (Noll at ¶ 24) indicates that this combined "firm" controls more channels than PRIMESTAR would if the application were granted.
- 4. Professor Hausman's observations at ¶ 24 that DirecTV and USSB have signed exclusives on programming do not support his or others' conclusions regarding anticompetitive vertical market foreclosure and have nothing to do with PRIMESTAR's attempts to compete as a DBS provider. The fact that DirecTV and USSB have obtained such programming from PRIMESTAR's partners indicates these vertically-integrated cable operators do not have the ability and/or the incentive to foreclose competitors. Moreover, to grant the application would not increase the ability of TCI or other vertically-integrated operators to deny programming to DBS competitors.

- 5. David Waterman's (and other related) research referred to by Echostar's expert (Noll at ¶ 35), even accepting its findings, fails to show any general pattern of discrimination against programming controlled by competitors and in which the cable operator has no interest, especially with respect to basic cable networks. It does show that cable operators with an interest in a program service are more likely to carry it than are operators without such an interest. But there is nothing anticompetitive about that. It merely shows that cable systems invest in programming to ensure that programming is available to enhance the demand for cable services.
- 6. Echostar's predictions of predatory tactics (Echostar's Consolidated Reply at 24, 25) do not make any economic sense, and it is noteworthy that they are not supported by its own expert. These allegations were treated at length and found to carry no weight in my earlier declaration at ¶ 22-26.
- 7. Professor Hausman is wrong at ¶ 12 in asserting that I claimed that cable operators will not have market power in 1996. Nowhere did I say anything about the lack of market power of cable operators. Instead, I was opining on the relevant market for DBS in 1996. Nor did I ever say that no competitive problem would arise if TCI acquired all available DBS frequencies (Hausman at ¶ 13). Rather I was applying standard market definition methodology to conclude that a hypothetical monopolist of DBS frequencies would not have market power because of adequate substitutes and competition from other MVPD providers.
- 8. Professor Hausman misstates the implications of my testimony in the 1985-86 Pacific Telesis ("PacTel") cellular case (Hausman at ¶ 20). These I predicted that PacTel's control of cellular would lead PacTel to pastion cellular technology as a mere complement to wireline telephony rather than developing it as a substitute, a prediction that Professor Hausman now concedes was accurate. More importantly, PacTel was in a position to control cellular's development because cellular service was the only existing technology that offered any hope of disciplining residential wireline telephone rates, and because FCC licensing limited the number of cellular competitors in each area to two.

Cable operators face many more actual and potential competitors, including multiple DBS competitors, and do not have the ability or luxury to control DBS' development.

- 9. Echostar's expert's conclusion that cable and satellite services are not now and are unlikely in the next few years to be in the same relevant market for purposes of competitive analysis (Noll at ¶ 19) is contradicted by Professor Hausman at ¶¶ 10, 11 and by the Commission in its 1994 Cable Report at ¶ 49.
- 10. None of the arguments presented in DirecTV's and Echostar's Consolidated Replies affects my conclusion that the application to assign Advanced's DBS authorizations to TEMPO is pro-competitive. New and rehashed arguments raised by PRIMESTAR's competitors and their consultants that the transfer is anticompetitive are not analytically sound and should be rejected.

I declare under penalty of perjury that the foregoing is true and correct.

Bruce M. Owen

January 3, 1995



## CURRICULUM VITÆ

#### Bruce M. Owen

OFFICE ADDRESS Economists Incorporated

1233 20th Street, N.W., Suite 600,

Washington, D.C. 20036

202 833-5224

BACKGROUND

Born 1943, Worcester, Massachusetts • Attended public schools in Millbury, Massachusetts. • Married 1965 to the former Josetta

Knopf • Two children: Peter 1969 and Bradford 1974.

**EDUCATION** 

B.A. Williams College, 1965.

Ph.D. Stanford University, 1970.

PRESENT POSITION

President, Economists Incorporated 1981- • Visiting Professor of Economics, Stanford University (Stanford in Washington) 1989-.

PREVIOUS EXPERIENCE

Antitrust Division, United States Department of Justice: Chief Economist, 1979-1981 • Duke University: Associate Professor of Business and Law 1978-1980, Adjunct Professor of Public Policy 1981-88 • Stanford University: Assistant Professor of Economics, 1973-1978 • White House Office of Telecommunications Policy: Chief Economist, 1971-1972.

CURRENT MEMBERSHIPS AND AFFILIATIONS

Member, American Economic Association • Member, Econometric Society • Member, Advisory Panel, ABA Antitrust Section Economics Committee • Member, American Law and Economics Association • Principal, Council for Excellence in Government • Member, National Economists Club.

**FELLOWSHIPS** 

Merit Scholar 1961-65 • Woodrow Wilson Fellow 1966 • National Defense Education Act Title IV Fellow 1966-69 • Brookings Economic Policy Fellow 1970-1971 • Hoover Institution, National Fellow 1974-1975 • Fellow, Aspen Institute for Humanistic Studies, and Chairman, Aspen Institute Task Force on the Future of the Postal Service 1978-79.

RECENT PRO-FESSIONAL ACTIVITIES Panelist, Symposium on Democracy, Diversity, and News Media Ownership, Stanford University, January 1990 • Panelist, Conference on the Reagan Revolution, University of Virginia Law School. April 1990 · Panelist, ABA Section of Antitrust Law Cable Television Symposium, June 1990 · Board of Editors, Journal of Media Economics, 1990 - Referee, Scandinavian Journal of Economics, 1990 • Chairman, Panel on Technological Change in Practice, 18th Annual Telecommunications Policy Research Conference, October 1990 • Discussant, Conference on Policy Approaches to the Deregulation of Network Industries, American Enterprise Institute, October 1990 • U.S. Advisory Team on Competition Law, Government of Jamaica, 1990-91 • Demonstration Expert Witness, DOJ Merger Training Program, December 1990 • Member, Economics and Finance Delegation to the Soviet Union, Citizen Ambassador Program, June 1991 • Organizer, Panel on the Future of the Broadcast Networks, 19th Annual Telecommunications Policy Research Conference, September 1991 • Faculty, ABA Antitrust Section, The Cutting Edge of Antitrust: Market Power, October 1991 • Referee, Quarterly Rev. of Econ. & Bus., 1992 • Referee, Journal of Industrial Econ., 1992 Leader, International Advisory Team on Competition Policy and Consumer Protection, Government of Argentina, 1992 • Referee, Journal of Policy Analysis and Mangement, 1992 • Organizer, World Bank Seminar on Competition Policy in Latin America, 1993 Advisor, World Bank Philippenes Private Sector Assessment, 1993 • Referee, National Research Council, 1993 • Speaker, World Bank/INDECOPI Conference on Competition Policy, Lima, Peru, 1994 • Speaker, International Law Institute Program for Russian Antitrust Officials, Washington, 1994 · Consultant on telecommunication to the Antitrust Division, U.S. Department of Justice, 1994 · Consultant on telecommunication to La Comisión Federal de Competencia, Mexico, 1994 · Referee, The Brookings Institution, 1994 • Editorial Board, HYPERTEXT MERGER POLICY PROJECT, 1994.

## **PUBLICATIONS**

#### **BOOKS**

- B. M. Owen, J. Beebe, and W. G. Manning, Jr., Television Economics, D.C. Heath, 1974.
- B. M. Owen, Economics and Freedom of Expression: Media Structure and the First Amendment, Ballinger, 1975.
- B. M. Owen and R. Braeutigam, The Regulation Game: Strategic Use of the Administrative Process, Ballinger, 1978.
- R. Noll and B. M. Owen, The Political Economy of Deregulation, American Enterprise Institute, 1983.
- B. M. Owen and S. Wildman, Video Economics, Harvard University Press, 1992.
- M. W. Frankena and B. M. Owen, Electric Utility Mergers: Principles of Antitrust Analysis, Praeger, 1994.
- B. M. Owen et al., *Economics of a Disaster: The* Exxon Valdez *Oil Spill*, Praeger, forthcoming 1995.

#### CHAPTERS OR SECTIONS OF BOOKS

- B. M. Owen, "The Role of Analysis in the Formation of Cable Television Policy," in R. E. Park (ed.) The Role of Analysis in Regulatory Decisionmaking: The Case of Cable Television, Lexington Books, 1973.
- B. M. Owen, "Diversity and Television," OTP Staff Research Paper, 1972, reprinted in D. H. Ginsburg, Regulation of Broadcasting, West, 1979.
- J. H. Beebe and B. M. Owen, "Alternative Structures for Television," OTP Staff Research Paper, 1972, reprinted in D. H. Ginsburg, Regulation of Broadcasting, West, 1979.
- B. M. Owen, "The Place of Print in an Electronic Society," in G. O. Robinson, ed., Communications for Tomorrow: Policy Perspectives for the Future, Praeger, 1978.

CHAPTERS OR SECTIONS OF BOOKS (CONTINUED)

- S. M. Besen, B. M. Mitchell, R. G. Noll, B. M. Owen, R. E. Park. and J. N. Rosse, "Economic Policy Research on Cable Television: Assessing the Cost and BeneWts of Cable Deregulation," in P. A. MacAvoy, ed., Deregulation of Cable Television, American Enterprise Institute, 1977.
- B. M. Owen, "Cable Television: The Framework of Regulation," in Study on Federal Regulation, Appendix to Vol. XI, Framework for Regulation, Committee on Governmental Affairs, United States Senate, 95<sup>th</sup> Congress, 2<sup>nd</sup> Session, October 1978.
- B. M. Owen, "The Rise and Fall of Cable Television Regulation," in L. Weiss, ed., The Regulatory Revolution, Little, Brown, 1981.
- B. M. Owen, "Differing Media, Differing Treatment?" in D. Brenner and W. Rivers, eds., Free But Regulated: Conflicting Traditions in Media Law, 1982.
- B. M. Owen and Robert D. Willig, "Economic and Postal Pricing Policy," in J. Fleishman, ed., The Future of the Postal Service, Praeger, 1983.
- R. W. Crandall and B. M. Owen, "Some Economic Implications of the Divestiture of the Bell Operating Companies," in H. Shooshan, ed., Disconnecting Bell, Pergamon Press, 1984.
- S. S. Wildman and B. M. Owen, "Program Competition in the New Video Industry," in E. Noam, ed., Rivalry Among the Video Transmission Media, Columbia Univ. Press, 1985.
- B. M. Owen, "Interest Group Behavior and the Political Economy of Regulation," in J. Meyers, ed., Incentives vs. Controls in Health Policy: Broadening the Debate, AEI, 1985.
- B. M. Owen, contributor, The Use of Economists in Antitrust Litigation, J. GreenWeld, ed., ABA Section of Antitrust Law, 1984.
- B. M. Owen and P. Gottlieb, "The Rise and Fall and Rise of Cable Television Regulation," in L. Weiss, ed. Regulatory Reform: What Actually Happened, Little, Brown, 1986.

## CHAPTERS OR SECTIONS OF BOOKS

- B. M. Owen, contributor, Horizontal Mergers: Law and Policy, ABA Section of Antitrust Law Monograph No. 12, 1986.
- R. G. Noll and B. M. Owen, "United States v. AT&T: An Interim Assessment," in Hausman and Bradley, eds., Future Competition in Telecommunications, Harvard Business School Press, 1988.
- R. G. Noll and B. M. Owen, United States v. AT&T: The Economic Issues, in Kwoka and White, eds., The Antitrust Revolution, Scott Foresman, 1988; 2<sup>nd</sup> ed. 1994.
- B. M. Owen, "Defining Geographic Markets under the 1984 Merger Guidelines: An Economic Perspective (Outline)," in Practising Law Institute, 27<sup>th</sup> Annual Advanced Antitrust Seminar, Course Handbook Series No. 581, PLI, 1987.

#### **ARTICLES**

- B. M. Owen, "Public Policy and Emerging Technology in the Media," 18 Public Policy 539, Summer 1970.
- B. M. Owen, "Monopoly Pricing in Combined Gas and Electric Utilities," 15 Antitrust Bulletin 713, Winter 1970.
- B. M. Owen, "Newspaper and Television Station Joint Ownership," 18 Antitrust Bulletin 787, Winter 1973.
- B. M. Owen, "Diversity in Broadcasting: The Economic View of Programming," 28 Journal of Communication 43, Spring 1978.
- B. M. Owen, "Structural Approaches to the Problem of TV Network Economic Dominance," 1979 Duke Law Journal 191, 1979.
- B. M. Owen, "Regulating Diversity: The Case of Radio Formats," 21 Journal of Broadcasting 305, Summer 1977.
- M. Spence and B. M. Owen, "Television Programming, Monopolistic Competition and Welfare," 91 Quarterly Journal of Economics 103, February 1977.
- W. Manning and B. M. Owen, "Television Rivalry and Network Power," 24 Public Policy 33, Winter 1976.

## ARTICLES (CONTINUED)

- B. M. Owen and J. Grundfest, "Kickbacks, Specialization, Price Fixing, and Efficiency in Residential Real Estate Markets," 29
  Stanford Law Review 931, May 1977.
- R. Braeutigam, B. M. Owen and J. Panzar, "An Economic Analysis of Alternative Fee Shifting Systems" 47 Law and Contemporary Problems 801, 1984.
- B. M. Owen and P. R. Greenhalgh, "Competitive Policy Considerations in Cable Television Franchising" 4 Contemporary Policy Issues 69, April 1986. (Working paper version appears in Options for Cable Legislation, Hearings before the Subcommittee on Telecommunications, Committee on Energy and Commerce, U.S. House of Representatives, Serial No. 98-73, 1983).
- B. M. Owen, "The Evolution of Clayton §7 Enforcement and the Beginnings of U.S. Industrial Policy" 31 Antitrust Bulletin 409, Summer 1986.
- B. M. Owen, "Determining Optimal Access to Regulated Essential Facilities," 58 Antitrust Law Journal 887 (1989).

# NOTES AND REVIEWS

- B. M. Owen, "Comment on the Perfectly Competitive Allocation of Public Goods," Review of Econ. and Statistics, November 1969.
- B. M. Owen, "Discussion" prepared for the Session on the Economics of the First Amendment, annual meetings of the American Economic Association, New York, December 1973, 64 American Economic Review 400, May 1974.
- R. G. Noll and B. M. Owen, "What Makes Reform Happen?" Regulation, March/April 1983.
- B. M. Owen, Book Review of F. Fisher, et al., Folded, Spindled, and Mutilated: Economic Analysis of U.S. v. IBM, Sloan Management Review, Winter 1984.
- B. M. Owen, "Cynicism and Credulity in Explaining Regulation," in The Political Economy of Regulation: Private Interests in the Regulatory Process, FTC Law and Economics Conf., March 1984.

# NOTES AND REVIEWS (CONTINUED)

- B. M. Owen, "Recent Developments in Cable Television Regulation," I Regulatory Reform: The ABA Section of Antitrust Law Industry Regulation Committee Newsletter, December 1985.
- B. M. Owen, Book Review of A. Brown, Commercial Media in Australia: Economics, Ownership, Technology and Regulation, 17 Economic Analysis and Policy (n.s.) 105, March 1987.
- B. M. Owen, "The Electronic Media," in Proceedings of the 1990 Stanford Symposium on Democracy, Diversity, and News Media Ownership (forthcoming).
- B. M. Owen, Book Review of P. Temin, The Fall of The Bell System, 1988 Regulation: AEI Journal on Government and Society 2.
- M. W. Frankena and B. M. Owen, "Competitive Issues in Electric Utility Mergers," International Merger Law, No. 26, October 1992.
- B. M. Owen, "Merger Control in Argentina," International Merger Law, No. 27, November 1992.
- M. W. Frankena and B. M. Owen, "Antitrust Analysis of Electric Utility Mergers After the Energy Policy Act," International Merger Law, No. 30, February 1993.
- M. W. Frankena and B. M. Owen, "Flawed Reasoning," *Public Utilities Fortnightly*, July 15, 1993.

# CONFERENCE PROCEEDINGS

- B. M. Owen, Editor, Papers and Proceedings, 1972 Conference On Telecommunications Policy Research, Office of Telecommunications Policy, 1972.
- B. M. Owen, Editor, Report of Papers and Proceedings, 1975 Conference on Telecommunications Policy Research, Aspen Institute for Humanistic Studies Program on Communications and Society, 1975.

# POPULAR ARTICLES

- B. M. Owen and J. Grundfest, "A Most Expensive 'Real-Estate Custom," "Los Angeles Times, December 4, 1977.
- B. M. Owen and R. G. Noll, "How Roles Grew in a TV Rule-Making Drama" Wall Street Journal, October 19, 1983.
- B. M. Owen, "Give AT&T the Freedom It Didn't Want," Wall Street Journal, December 6, 1984.
- B. M. Owen, "Cable Competition at Sufferance of Cities," Wall Street Journal, May 9, 1985.
- B. M. Owen, "Economists as Trustbusters?" Wall Street Journal, January 22, 1987.

## RESEARCH REPORTS

- B. M. Owen (with others) Analysis of the Causes and Effects of Increases in Same-Year Rerun Programming and Related Issues in Prime Time Network Television, Office of Telecommunications Policy, Executive Office of the President, 1973.
- B. M. Owen and J. Grundfest, Licensing of Real Estate Brokers as Underwritten Title Insurance Agents, Report to the State of California, Studies in Industry Economics #64, Stanford Univ., 1976.
- D. A. Dunn and B. M. Owen, Policy Options in Mobile Radio Spectrum Management, prepared under contract with the UHF Task Force of the FCC, Stanford University, 1978.
- B. M. Owen, Five Propositions on the Social Effects of Television, prepared for the Sloan Foundation, Duke University, 1979.
- B. M. Owen, P. R. Greenhalgh and W. C. Myslinski, Notes on the Merger Guidelines: Economic Perspectives, Economists Incorporated Research Report, 1982.
- K. C. Baseman and B. M. Owen, A Framework for Economic Analysis of Electronic Media Concentration Issues. Economists Incorporated Research Report, 1982.
- R. W. Crandall, R. G. Noll, and B. M. Owen, Economic Effects of the Financial Interest and Syndication Rule. Economists Incorporated Research Report, 1983.

#### RESEARCH REPORTS CONTINUED

- B. M. Owen, M. Spence and P. R. Greenhalgh, Federal Antitrust Policy and the Incentive to Undertake Research and Development in the Information Technologies, prepared for the OYce of Technology Assessment, U.S. Congress. Economists Incorporated Research Report, 1983.
- R. W. Crandall, B. M. Owen, and R. S. Skitol, Competition Policy in Jamaica, Report of the Advisory Team to the Government of Jamaica, January 1991.
- B. M. Owen, et al., An Economic Analysis of the Effect of the Exxon Valdez Oil Spill on Alaskan Seafood Prices, Report to the Trans-Alaska Pipeline Liability Fund, December 1991.
- B. M. Owen, et al., Competition Policy and Consumer Protection in Argentina, Report of the Advisory Team to the Government of Argentina, July 1992.
- B. M. Owen, et al., Cable Rate Regulation—A Multi-Stage Benchmark Approach, January 1993.

#### **WORKING PAPERS**

- B. M. Owen, "Externalities, Public Goods and Economic Growth," Center for Res. in Economic Growth #84, Stanford Univ., 1969.
- J. N. Rosse, B. M. Owen and D. L. Grey, "Economic Issues in the Joint Ownership of Newspaper and Television Media," Center for Research in Economic Growth #97, Stanford University, 1970.
- B. M. Owen, "The Price Effects of Mergers," (dissertation) Center for Research in Economic Growth #96, Stanford University, 1970.
- B. M. Owen, D. L. Grey, and J. N. Rosse, "A Selected Bibliography in the Economics of the Mass Media," Center for Research in Economic Growth #99, Stanford University, 1970.
- S. A. Lasher and B. M. Owen, "International Facilities Study,"
  Office of Telecommunications Policy, Executive Office of the
  President, Staff Res. Paper, 1971. [NTIS accession no. PB 208 670.]

## WORKING PAPERS CONTINUED

- B. M. Owen, "The Regulation of Commercial Radio Stations,"
  Office of Telecommunications Policy, Executive Office of the
  President, Staff Res. Paper, 1971. [NTIS accession no. PB 208 462.]
- B. M. Owen, "Spectrum Allocation: A Survey of Alternative Methodologies," Office of Telecommunications Policy, Executive Office of the President, Staff Res. Paper, 1972. [NTIS accession no. PB 208 666.]
- B. M. Owen, "Specialized Carriers: A Conceptual Approach to Rates and Entry," Office of Telecommunications Policy, Executive Office of the President, Staff Res. Paper, 1972. [NTIS accession no. PB 211 652.]
- B. M. Owen, "Measuring Violence on Television: The Gerbner Index," Office of Telecommunications Policy, Executive Office of the President, Staff Research Paper, 1972. [NTIS accession number PB 210 827.]
- R. Braeutigam, B. M. Owen and T. Ulen, "Rate Structure and Open Entry: The Problem of Regulating Competition," Center for Research in Economic Growth #166, Stanford University, 1974.
- J. N. Rosse, B. M. Owen, and J. Dertouzos, "Trends in the Daily Newspaper Industry 1923-1973," Studies in Industry Economics #57, Stanford University, 1975.
- B. M. Owen, C. Dunham and O. Phillips, "Toward An Economic Theory of the Administrative Agency," Studies in Industry Economics #78, Stanford University, 1977.
- B. Mickle and B. M. Owen, "Vertical Integration: Review and Applications," Studies in Industry Economics #73, Stanford University, 1977.